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Management Guide for

Native Aphids

Family: Aphididae

Aphids can be found almost anywhere on a tree, particularly on new growth.

Often, the first evidence noticed is the sticky "honeydew" excrement on affected plants.

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Key Points

- Weather and other natural controls usually keep aphids in check.
- A forceful water spray may remove aphids.
- Insecticides are most effective in nymph stage.
- Several beneficial insects that are important in aphid control are harmed by insecticide treatments.

Damage is usually seen on ornamentals

Aphids infest hardwoods, conifers and many other plant species throughout the United States. They are common, though rarely noticed, in forest settings. Aphids are usually of greatest concern in nurseries, seed orchards, and shade and ornamental trees.

They have piercing mouth parts through which they fed on sap from nearly all parts of host plants-foliage, buds, flowers, fruits, twigs, and roots. Damage on needles may result in necrotic spots similar to some diseases or feeding by other insects.

Aphids excrete a sticky substance known as "honeydew" which is feed upon by ants and other insects. It may also provide growth medium for black fungus molds (sooty molds). Honeydew and sooty mold, associated with aphids, usually mar the beauty of ornamentals.

Heavy infestations distort foliage, cause terminal dieback, reduce tree vitality, weaken the tree, and cause branch and crown dieback. In young trees and seedlings, mortality can occur from heavy infestations.

Aphids are usually controlled effectively by nature.

Adverse weather conditions such as beating rains and low temperatures, as well as fungus diseases, insect predators and parasites keep the aphids in check.

Life History

Some aphids require alternate hosts in alternate generations.

Overwintering can occur in any life stage, but the most common is the adult or egg. Eggs hatch and live births usually occur in the spring, and nymphs begin feeding on selected parts of the plant. Some aphids migrate as nymphs; others spend their life in one place. Some aphids have only one generation per year; others have several. Some aphids require alternate hosts in alternate generations.

Management

Warning:

Insecticide applications can destroy beneficial insects as well as pests and leave trees or shrubs unprotected if pest resurgence occurs.

Adverse weather conditions such as beating rains and low temperatures, as well as fungus diseases, insect predators and parasites keep the aphids in check. Aphid enemies include lady beetles, syrphid fly larvae, aphis lions and small wasp parasites known as braconids.

When control measures are warranted careful concideration should be given to the choices of whether to use cultural, biological, or chemical measures. Insecticide applications can destroy beneficial insects as well as pests and leave trees or shrubs unprotected if pest resurgence occurs. Several beneficial insects play an important role in natural aphid control.

If this is a concern, try washing aphids away with a forceful stream of water before using insecticide sprays. However, insecticides are often used to protect high value trees and are most effective against the nymphs.

Figure 1. Magnified view of adult aphid.

Recognizing plant aphids

Aphids vary in bodycovering and range in size from 1/5 to 1/4 inch long. They are all soft-bodied and are usually gregarious insects. Most aphids are pear-shaped, with a pair of cornicles (tubes) at the posterior of the abdomen. They may be transparent, yellow, green, pink, brown, almost black, or spotted. Some species may be covered with white woolly wax.

Most aphids that are seen are wingless; however, winged adults may be observed at various times during the summer.

The presence of sticky exudates (honeydew), sooty mold, and large numbers of ants probably indicate that aphids are also present.

Other Reading

Furniss, R. L., and V. M. Caroline. 1977. Western forest insects. USDA Forest Service. Misc. Pub. 1339, 654 p.

Johnson, W. T., and H. H. Lyon. 1988. Insects that feed on trees and shrubs. 2nd ed. revised. Ithaca: Cornell University Press, 560 p.

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